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# OFFICIAL GAZETTE

## GOVERNMENT OF GOA

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Department of Labour

#### Notification

26/6/86-LAB

Whereas certain draft rules to amend the Goa, Daman and Diu Factories Rules, 1985 were published as required by sub-section (1) of Section 115 of the Factories Act, 1948 (Central Act 63 of 1948), in the Official Gazette, Series I, No. 12 dated 21-6-1990 under Notification No. 26/6/86-LAB dated 17-5-1990 of the Labour Department, Government of Goa, inviting objections and suggestions from all persons likely to be affected thereby within three months from the date of publication of the said Notification in the Official Gazette.

And whereas the said Gazette was made available to the public on 21-6-1990.

And whereas no objections and suggestions have been received from the public on the said draft by the Government.

Now, therefore, in exercise of the powers conferred by Section 112 of the Factories Act, 1948 (Central Act 63 of 1948), and all other powers enabling it in that behalf, the Government of Goa, hereby makes the following rules so as to amend the Goa, Daman and Diu Factories Rules, 1985, namely:—

1. *Short title and commencement.*—(1) These rules may be called the Goa Factories (Second Amendment) Rules, 1990.

(2) They shall come into force at once.

2. *Amendment of rule 131.*—In rule 131 of the Goa, Daman and Diu Factories Rules, 1985 (hereinafter called the 'principal Rules'), after item XXVI, the following item shall be inserted, namely:—

"XXVII. Operations in Foundries."

3. *Insertion of new Schedule.*—In the principal Rules, after Schedule XXVI, the following new Schedule shall be inserted, namely:—

#### "SCHEDULE XXVII

#### Operations in Foundries

1. *Application.*—Provisions of this Schedule shall apply to all parts of factories where any of the following operations or processes are carried on:

(a) the production of iron castings or, as the case may be, steel castings by casting in moulds

made of sand, loam, moulding composition or other mixture of materials, or by shell moulding, or by centrifugal casting and process incidental to such production;

(b) the production of non-ferrous casting by casting metal in moulds made of sands, loam, metal, moulding composition or other material or mixture of materials or by shell mouldings, die-casting (including pressure die-casting), centrifugal casting or continuous casting and any process incidental to such production; and

(c) the melting and casting of non-ferrous metal for the production of ingots, billets, slabs and other similar products, and the stripping thereof;

but shall not apply with respect to—

(a) any process with respect to the melting and manufacture of lead and the electric accumulators;

(b) any process for the purpose of a printing works; or

(c) any melting process in which metal is obtained by a reducing operation or any process incidental to such operation; or

(d) the production of steel in the form of ingots; or

(e) any process in the course of the manufacture of solder or any process incidental to such manufacture; or

(f) the melting and casting of lead or any lead—based alloy for the production of ingots, billets, slabs or other similar products or the stripping thereof, or any process incidental to such melting, casting or stripping.

2. *Definition.*—For the purpose of this Schedule,—

(a) 'approved respirator' means a respirator of a type approved by the Chief Inspector;

(b) 'cupola or furnace' includes a receiver associated therewith;

(c) 'dressing or fettling operations' includes stripping and other removal of adherent sand, cores, runners, risers, flash and other surplus metal from a casting and the production of reasonably clean and smooth surface, but does not include—

(a) the removal of metal from a casting when performed incidentally in connection with the

machining or assembling of castings after they have been dressed or fettled, or

(b) any operation which is a knock-out operation within the meaning of this Schedule;

(d) 'foundry' means those parts of a factory in which the production of iron or steel or non-ferrous castings (not being the production of pig iron or the production of steel in the form of ingots) is carried on by casting in moulds made of sand, loam, moulding composition or other mixture of materials, or by shell moulding or by centrifugal casting in metal moulds lined with sand, or dye casting including pressure dye castings, together with any part of the factory in which any of the following processes are carried on as incidental processes in connection with and in the course of, such production, namely, the preparation and mixing of materials used in foundry process, the preparation of moulds and cores, knockout operations and dressing or fettling operations;

(e) 'knock-out operations' means all methods of removing castings from moulds and the following operations, when done in connection therewith, namely, stripping, coring-out and the removal of runners and risers;

(f) 'pouring aisle' means an aisle leading from a main gangway or directly from a cupola or furnace to where metal is poured into moulds.

3. *Prohibition of use of certain materials as parting materials.*—(1) A material shall not be used as a parting material if it is a material containing compounds of silicon calculated as silica to the extent of more than 5 per cent by weight of the dry material:

Provided that this prohibition shall not prevent the following being used as a parting material if the material does not contain an admixture of any other silica—

- (a) zirconium silicate (Zircon).
- (b) calcined china clay.
- (c) calcined aluminous fire clay.
- (d) sillimanite.
- (e) calcined or fused alumina.
- (f) olivine.
- (g) natural sand.

(2) Dust or other matter deposited from a fettling or blasting process shall not be used as a parting material or as a constituent in a parting material.

4. *Arrangement and storage.*—For the purposes of promoting safety and cleanliness in workrooms the following requirements shall be observed:—

(a) moulding boxes, loam plates, ladles, patterns, pattern plates, frames, boards, box weights, and other heavy articles shall be so arranged and placed as to enable work to be carried on without unnecessary risk;

(b) suitable and conveniently accessible racks, bins or other receptacles shall be provided and used for the storage of other gear and tools;

(c) where there is bulk storage of sand, fuel, metal scrap or other materials or residues, suitable bins, bunkers or other receptacles shall be provided for the purpose of such storage.

5. *Construction of floors.*—(1) Floor of indoor workplaces in which the processes are carried on, other than parts which are of sand, shall have an even surface of hard material.

(2) No part of the floor or any such indoor workplace shall be of sand except where this is necessary by reason of the work done.

(3) All parts of the surface of the floor of any such indoor workplace which are of sand shall, so far as practicable, be maintained in an even and firm condition.

6. *Cleanliness of indoor workplaces.*—(1) All accessible parts of the walls of every indoor workplaces in which the processes are carried on and of everything affixed to those walls shall be effectively cleaned by a suitable method to a height of not less than 4.2 metres from the floor at least once in every period of fourteen months. A record of the carrying out of every such effective cleaning in pursuance of this paragraph including the date (which shall be not less than five months nor more than nine months after the last immediately preceding washing, cleaning or other treatment) shall be properly maintained.

(2) Effective cleaning by a suitable method shall be carried out at least once every working day of all accessible parts of the floor of every indoor workplace in which the processes are carried on, other than parts which are of sand; and the parts which are of sand shall be kept in good order.

7. *Manual operations involving molten metal.*—(1) There shall be provided and properly maintained for all persons employed on manual operations involving molten metal with which they are liable to be splashed, a working space for that operation—

(a) which is adequate for the safe performance of the work; and

(b) which, so far as reasonably practicable, is kept free from obstruction.

(2) Any operation involving the carrying by hand of a container holding molten metal shall be performed on a floor all parts of which where any person walks while engaged in the operation shall be at the same level:

Provided that, where necessary to enable the operation to be performed without undue risk, nothing in this paragraph shall prevent the occasional or exceptional use of a working space on a different level from the floor, being a space provided with a safe means of access from the floor for any person while engaged in the operation.

8. *Gangways and pouring aisles.*—(1) In every workroom to which this paragraph applies, whether constructed, reconstructed or converted for use as such after the making of this Schedule and so far as reasonably practicable, in every other workroom to which this Paragraph applies, sufficient and

clearly defined main gangways shall be provided and properly maintained which—

(a) shall have an even surface of hard material and shall, in particular, not be of sand or have on them more sand than is necessary to avoid risk of flying metal from accidental spillage;

(b) shall be kept, so far as reasonably practicable, free from obstruction;

(c) if not used for carrying molten metal, shall be at least 920 millimetres in width;

(d) if used for carrying molten metal shall be—

(i) where truck ladles are used exclusively, at least 600 millimetres wider than the overall width of the ladle;

(ii) where hand shanks are carried by not more than two men, at least 920 millimetres in width;

(iii) where hand shanks are carried by more than two men, at least 1.2 metres in width; and

(iv) where used for simultaneous travel in both directions by men carrying hand shanks, at least 1.8 metres in width.

(2) In workroom to which this Paragraph applies, whether constructed, reconstructed or converted for use as such after the making of this Schedule, sufficient and clearly defined pouring aisles shall be provided and properly maintained which—

(a) shall have an even surface of hard material and shall, in particular, not be of sand or have on them more sand than is necessary to avoid risk of flying metal from accidental spillage;

(b) shall be kept so far as reasonably practicable free from obstruction;

(c) if molten metal is carried in hand ladles or bulk ladles by not more than two men per ladle, shall be at least 460 millimetres wide, but where any moulds alongside the aisle are more than 510 millimetres above the floor of the aisle, the aisle shall be not less than 600 millimetres wide;

(d) if molten metal is carried in hand ladles or bulk ladles by more than two men per ladle, shall be at least 760 millimetres wide;

(e) if molten metal is carried in crane, trolley or truck ladles, shall be of a width adequate for the safe performance of the work.

(3) Requirements of sub-paragraphs (1) and (2) shall not apply to any workroom or part of a workroom if, by reason of the nature of the work done therein, the floor of that workroom or, as the case may be, that part of a workroom has to be of sand.

(4) In this paragraph 'Workroom to which this paragraph applies' means a part of a ferrous or non-ferrous foundry in which molten metal is transported or used, and a workroom to which this paragraph applies shall be deemed for the purposes of this paragraph to have been constructed, reconstructed or converted for use as such after the making of this Schedule if the construction, reconstruction or conversion thereof was begun after the making of this Schedule.

9. *Work near cupolas and furnaces.*—No person shall carry out any work within a distance of 4 metres from a vertical line passing through the delivery end of any spout of a cupola or furnace, being a spout used for delivering molten metal, or within a distance of 2.4 metres from a vertical line passing through the nearest part of any ladle which is in position at the end of such a spout, except in either case, where it is necessary for the proper use or maintenance of a cupola or furnace that work should be carried out within that distance of that work, and it being carried out at such a time and under such conditions that there is no danger to the person carrying it out, from molten metal which is being obtained from the cupola or furnace or is in a ladle in position at the end of the spout.

10. *Dust and fumes.*—(1) Open coal, coke or wood fires shall not be used for heating or drying ladles inside a workroom unless adequate measures are taken to prevent, so far as practicable, fumes or other impurities from entering into or remaining in the atmosphere of the workroom.

(2) No open coal, coke or wood fires shall be used for drying moulds except in circumstances in which the use of such fires is unavoidable.

(3) Mould stoves, core stoves and annealing furnaces shall be so designed, constructed, maintained and worked as to prevent, so far as practicable, offensive or injurious fumes from entering into any workroom during any period when a person is employed therein.

(4) All knock-out operations shall be carried out—

(a) in a separate part of the foundry suitably partitioned off, being a room or part in which, so far as reasonably practicable, effective and suitable local exhaust ventilation and a high standard of general ventilation are provided; or

(b) in an area of the foundry in which, so far as reasonable practicable, effective and suitable local exhaust ventilation is provided, or where compliance with this requirement is not reasonably practicable, a high standard of general ventilation is provided.

(5) All dressing or fettling operations shall be carried out—

(a) in a separate room or in a separate part of the foundry suitably partitioned off; or

(b) in an area of the foundry set apart for the purpose;

and shall, so far as reasonably practicable, be carried out with effective and suitable local exhaust ventilation or other equally effective means of suppressing dust, operating as near as possible to the point of origin of the dust.

11. *Maintenance and examination of exhaust plant.*

—(1) All ventilation plants used for the purpose of extracting, suppressing or controlling dust or fumes shall be properly maintained.

(2) All ventilating plants used for the purpose of extracting, suppressing or controlling dust or fumes shall be examined and inspected once every week by

a responsible person. It shall be thoroughly examined and tested by a competent person at least once in every period of twelve months; and particulars of the results of every such examination and test shall be entered in an approved register which shall be available for inspection by an Inspector. Any defect found on any such examination and test shall be immediately reported in writing by the person carrying out the examination and test, to the occupier or manager of the factory.

**12. Protective equipment.**—(1) The occupier shall provide and maintain suitable protective equipment specified for the protection of workers.

(a) suitable gloves or other protection for the hands for workers engaged in handling any hot material likely to cause damage to the hands by burn, scald or scar, or in handling pig iron, rough castings or other articles likely to cause damage to the hands by cut or abrasion;

(b) approved respirators for workers carrying out any operations creating a heavy dust concentration which cannot be dispelled quickly and effectively by the existing ventilation arrangements.

(2) No respirator provided for the purposes of clause 1 (b) and which has been worn by a person shall be worn by another person if it has not since been thoroughly cleaned and disinfected.

(3) Persons who for any length of time —

(a) work at a spout of or attend to, a cupola or furnace in such circumstances that material therefrom may come into contact with the body, being material at such a temperature that its contact with the body would cause a burn; or

(b) are engaged in, or in assisting with, the pouring of molten metal; or

(c) carry by hand or move by manual power any ladle or mould containing molten metal; or

(d) are engaged in knocking out operations involving material at such a temperature that its contact with the body would cause a burn;

shall be provided with suitable footwear and gaiters which when worn by them prevent so far as reasonably practicable, risk of burns to their feet and ankles.

(4) Wherever practicable, suitable screens shall be provided for protection against flying materials (including splashes of molten metal and sparks and chips thrown off in the course of any process).

(5) The occupier shall provide and maintain suitable accommodation for the storage and make adequate arrangements for cleaning and maintaining of the protective equipment supplied in pursuance of this paragraph.

(6) Every person shall make full and proper use of the equipment provided for his protection in pursuance of sub-paragraph (1) and (4) and shall without delay report to the occupier, manager or other appropriate person any defect in, or loss of, the same.

**13. Washing and bathing facilities.**—(1) There shall be provided and maintained in clean state and

good repair for the use of all workers employed in the foundry —

(a) a wash place under cover with either —

(i) a trough with impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 60 centimetres for every 10 such persons employed at any one time and having a constant supply of clean water from taps or jets above the trough at intervals of not more than 60 centimetres; or

(ii) at least one tap or stand pipe for every 10 such persons employed at any one time, and having a constant supply of clean water, the tap or stand pipe being spaced not less than 1.2 metres apart; and

(b) not less than one half of the total number of washing places provided under clause (a) shall be in the form of bath rooms.

(c) a sufficient supply of clean towels made of suitable material changed daily, with sufficient supply of nail brushes and soap.

(2) The facilities provided for the purposes of sub-paragraph (1) shall be placed in charge of a responsible person or persons and maintained in a clean and orderly condition.

**14. Disposal of dross and skimmings.**—Dross and skimmings removed from molten metal or taken from a furnace shall be placed forthwith in suitable receptacles.

**15. Disposal of waste.**—Appropriate measures shall be taken for the disposal of all waste products from shell moulding (including waste burnt sand) as soon as reasonably practicable after the castings have been knocked-out.

**16. Material and equipment left out of doors.**—All material and equipment left out of doors (including materials and equipment so left only temporarily or occasionally) shall be so arranged and placed as to avoid unnecessary risk. There shall be safe means of access to all such materials and equipment and, so far as reasonably practicable, such access shall be by roadways or pathways which shall be properly maintained. Such roadways or pathways shall have a firm and even surface and shall, so far as reasonably practicable be kept free from obstruction.

**17. Medical facilities and records of examinations and tests.**—(1) The occupier of every factory to which the Schedule applies, shall —

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

**18. Medical examination by Certifying Surgeon. —**

(1) Every worker employed in a foundry shall be examined by a Certifying Surgeon within 15 days of his first employment. Such medical examination shall include pulmonary function tests and chest X-ray. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every twelve months. Such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests as specified in sub-paragraph (1) except chest X-ray which will be once in every 3 years.

(3) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in Form 28. The record of examination and re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the test, shall also be entered by the Certifying Surgeon in a health register in Form 29.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that con-

tinuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in these documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work under sub-paragraph (5), shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

**19. Exemption. —** If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this Schedule is not necessary for protection of the workers in the factory, the Chief Inspector may by a certificate in writing, which he may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein".

By order and in the name of the Governor of Goa.

*Subhash V. Elekar*, Under Secretary (Labour).

Panaji, 30th November, 1990.